

FAX

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Number of pages including cover sheet 22

To:

Albert W. Paladini
Patent Technology Center
2100
Application No.: 10/079309
Art Unit: 2125

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From:

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REMARKS:

☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

REFERENCE: Application/Control Number 10/079309

Art Unit: 2125

Patent Technology Center 2100: Computer Architecture, Software & Information Security

Dear Mr. Paladini:

Attached is our response to your Office Action regarding our Patent Application No. 10/079309. The attached response includes additional drawings as well as a more detailed description of the invention. Our initial filing of this patent included two CDs (one original and one duplicate) containing the actual computer source code for this invention. We have not resubmitted this code because it has not changed. If you need us to resubmit this code, please let us know so that we can immediately provide it to you.

Thank you in advance for all of your efforts in reviewing our application.

Sincerely,



Gary John Corey



May 7, 2003

Open PC-Based Machine Tool Controllers
for CNC and Factory Automation
for Power, Price & Ease of Use



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Dear Mr. Albert Paladini
Patent Examiner
Fax: 703-746-7239

Application/Control Number: 10/079,309
Art Unit: 2125

Regarding the 35 USC 102 issue of public use or sale activity, you asked us for an explanation of how, when and whom this technology was used.

To explain what we meant by stating "Multi-axes Tool compensation has been in development and field use since 1991 by my customers" is that we created a related technology in this field but it is a different technology in its core approach. The technology that we wish to patent has not been used in this form by anyone outside this company while we developed this prototype, which was based on ideas from our own Intelligent Post Processor. We have never sold, lent or released to the public the technology for which we are applying. This field is our company's niche and we are now applying for a new technological approach. Prior to us applying for the patent no other company was using or promoting this approach.

We had originally developed a computer program we called the Intelligent Post Processor. This feature recalculated multi-axes tool positions in an external CAD/CAM drawing system, not in the machine tool itself, then the end user wrote and downloaded a file in a G code format with the multiple-axes positions all pre-determined.

Our new approach:

- (1) Is to calculate for Multi-axes Tool Compensation "on the fly."
- (2) Do this calculation inside a machine tool, not external.
- (3) Not to store or pass the compensated positions pre-calculated by geometry alone but rather expand the intelligence of each calculation for compensated tool positions based on many internal factors of the machine tool such as changes to offset positions, fixture alignments, tool shape, resharpener tools, worn tools, physical head dynamics, mechanical styles and types, while doing "on-the-fly" compensation based on these ever changing conditions.
- (4) Using artificial intelligence, keep a database in the machine's memory by learning from what the machine can do.

We apologize for the lack of information submitted in our first draft; this was the first patent we applied for. Since our patent is for a technology rather than a physical device, it was difficult to relate to other patents to follow their approach. We are a small company in which our direct competitors are much larger than us. We have spent a great deal of time on this project and this patent would really help protect what we worked so hard to achieve. We are able and willing to make any changes you suggest.

We have resubmitted our patent application per your recommendations in today's mail.

Sincerely,

Gary J. Corey

21445 Bundy Canyon Drive, Wildomar, California, USA, 92595

Title of Invention: Multi-Axes Tool Compensation – 3D and 5-axis real-time interactive tool compensation inside the CNC machine tool controller.